# PAT

## PATENT COOPERATION TREATY

PCT

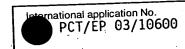
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### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER see Notification of (Form PCT/ISA/2	f Transmittal of International Search Report 20) as well as, where applicable, item 5 below.
S30490PCT International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
	23/09/2003	12/12/2002
PCT/EP 03/10600	23/09/2003	12/12/2002
Applicant		
SONY INTERNATIONAL (EURO	PE) GMBH	
This International Search Report has be	een prepared by this International Searching Auth	nority and is transmitted to the applicant
according to Article 18. A copy is being	transmitted to the International Bureau.	
	choots	
This International Search Report consist	sts of a total of <u>6</u> sheets. by a copy of each prior art document cited in this	report.
X It is also accompanied	by a copy of cach prior are document	
Basis of the report		
the lenguage th	he international search was carried out on the ba	sis of the international application in the
language in which it was filed,	unless otherwise indicated under this item.	
Authority (Rule 23.1(b)	h was carried out on the basis of a translation of t )).	
b. With regard to any nucleotide	and/or amino acid sequence disclosed in the in	nternational application, the international search
was carried out on the basis of	the sequence listing : ational application in written form.	
contained in the intern	international application in computer readable for	<b>m.</b>
	y to this Authority in written form.	
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the extension that the	subsequently furnished written sequence listing (	does not go beyond the disclosure in the
international application	on as filed has been furnished.	
	information recorded in computer readable form	is identical to the written sequence listing has been
furnished		
Certain claims were	found unsearchable (See Box I).	
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3. X Unity of invention is		
4. With regard to the title,		
4. With regard to the title,  X the text is approved a	s submitted by the applicant.	
	ablished by this Authority to read as follows:	
5. With regard to the abstract,		
the text is approved a	s submitted by the applicant.	
	ablished, according to Rule 38.2(b), by this Authon the date of mailing of this international search re	rity as it appears in Box III. The applicant may, eport, submit comments to this Authority.
6 The figure of the drawings to be	published with the abstract is Figure No.	
as suggested by the		X None of the figures.
	nt failed to suggest a figure.	
	etter characterizes the invention.	
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		laims were found unsearchable (Continuation of item 1 of first sneet)
		en established in respect of certain claims under Article 17(2)(a) for the following reasons:
nis Inter	national Search Report has not bee	BU 62/90)(2)(4) 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20
1.1	Claims Nos.:	ter not required to be searched by this Authority, namely:
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	Glaims Nos.:	International Application that do not comply with the prescribed requirements to such pational Search can be carried out, specifically:
	an extent that no meaningful Intern	International Application trial do not comp.) national Search can be carried out, specifically:
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[	Claims Nos	ms and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
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		Continuation of item 2 of first sheet)
3ox II	Observations where unity o	of invention is lacking (Continuation of item 2 of first sheet)
	ternational Searching Authority foun	nd multiple inventions in this international application, as follows:
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		n fees were timely paid by the applicant, this International Search Report covers all
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	searchable claims.	
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2 [	As only some of the required ac	additional search fees were timely paid by the applicant, this International Search Report hich fees were paid, specifically claims Nos.:
3.	covers only those claims for wh	idditional search fees were lithely paid by hich fees were paid, specifically claims Nos.:
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4. [	No required additional search restricted to the invention first	fees were timely paid by the applicant. Consequently, this International Search Report is mentioned in the claims; it is covered by claims Nos.:
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## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-28 and partially 44-48 and 52

Method of solubilizing carbon nanotubes comprising the steps of mixing functionalized carbon nanotubes and a monomer molecule (or a precursor of a monomer) and then polymerizing wherein said polymerization occurs at the functional groups on the nanotubes.

Modified carbon nanotubes and an association of carbon

Modified carbon nanotubes and an association of carbon nanotubes obtainable by the afore-mentioned process. Use of the afore-mentioned modified carbon nanotubes.

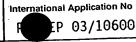
2. Claims: 29-43, 49-51 and partially 44-48, 52

Method for solubilizing carbon nanotubes comprising the steps of mixing together carbon nanotubes and urea and heating the mixture.

Modified carbon nanotubes and an association of carbon nanotubes obtainable by the afore-mentioned process.

Use of the afore-mentioned modified carbon nanotubes.

### INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C01B31/02 C08K7/24 C08G18/00

C08G18/28

C08K3/04 C08G18/08 C08K9/04 C07C263/06 C08G18/70

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

 $\frac{\text{Minimum documentation searched (classification system followed by classification symbols)}{\text{IPC 7}} \frac{\text{C01B C08K C08G C07C}}{\text{C01B C08K C08G C07C}}$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, CHEM ABS Data

	NTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Category °	US 6 426 134 B1 (LAVIN JOHN GERARD ET AL) 30 July 2002 (2002-07-30)	1-3,7, 9-16,28, 44,45,52
P,X	column 5, line 27 -column 6, line 24  WO 03/038837 A (HYPERION CATALYSIS INT)	1-3,7, 9-16,24,
۲,۸	8 May 2003 (2003-05-08)	25,28, 44,45,52
	page 2, line 20 - line 25 page 9, line 22 -page 10, line 3	
	page 14, line 2 - line 4 page 14, line 24 - line 25 page 17, line 30 - line 31	
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Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
<ul> <li>Special categories of cited documents:</li> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the international filing date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the international filing date but later than the priority date claimed</li> </ul>	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family
Date of the actual completion of the international search  12 May 2004	Date of mailing of the international search report
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer  Marucci, A

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# INTERNATIONAL SEARCH REPORT

International Application No /EP 03/10600

(001111111111111111111111111111111111	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.
ategory °	Citation of document, with indication, where appropriate, of the relevant passages	rielevant to deministra
•	US 2002/161101 A1 (CARROLL DAVID ET AL) 31 October 2002 (2002-10-31)	1,3,7,9, 11-16, 28,44, 45,52
	paragraphs [0022],[0042]-[0047],[0051],[0058],[0062]	
	WO 01/10779 A (HYPERION CATALYSIS INT) 15 February 2001 (2001-02-15)	1,3, 11-16, 28,44, 45,52
	page 3, line 18 - line 19 page 6, line 13 - line 19; examples 3,5; table 1	
\	HIRSCH, ANDREAS: "Functionalization of Single-Walled Carbon Nanotubes" ANGEW. CHEM. INT. ED., 2002 (2003,06-03)	1-6
	ANGEW. CHEM. INT. ED., vol. 41, no. 11, 3 June 2002 (2002-06-03), pages 1853-1859, XP002241543 cited in the application "Covalent Sidewall Functionalization"	
<b>A</b> · · · ·	EP 0 716 044 A (NAT SCIENCE COUNCIL) 12 June 1996 (1996-06-12) the whole document	29-52
Α	VAN STEEN ERIC ET AL: "Comparison of preparation methods for carbon nanotubes supported iron Fischer-Tropsch catalysts" FISCHER-TROPSCH SYNTHESIS ON THE EVE OF THE XXI CENTURY (CATSA); KRUGER PARK, SOUTH	29,30, 44,45,52
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mation on patent family members

International Application No

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